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FINAL REPORT: ONR N00014-92-J-1578
(prepared by Jody W. Deming)

In March of 1997, the UW Marine Bioremediation Program (MBP) was reviewed for the last time by the external board of visitors designated for this task. Their positive and supportive assessment of the program provided continued incentives during the final months funded by the original ONR URI award and beyond. A six-month no-cost extension of the award, from April to October, 1997, enabled continued support for MBP graduate students. In particular, Karl Rockne (advised by Stuart Strand and Dave Stensel in Civil Engineering) was able to complete and defend his PhD Thesis on "Biodegradation of multi-ring homocyclic and heterocyclic aromatic compounds under anaerobic conditions in marine environments." Rockne is now pursuing postdoctoral research in the laboratory of Lily Young at Rutgers University. Allison Geiselbrecht (advised by Staley in Microbiology) will soon be defending her thesis on "The distribution and degradative potential of aerobic polycyclic aromatic hydrocarbon-degrading bacteria in marine sediments." She begins an NRC postdoctoral fellowship in September 1998 at the NOAA National Marine Fisheries Science Center in Seattle, WA. The award of this fellowship marks the beginning of national recognition of a new joint program between the UW and NMFS in marine bioremediation. This joint program is also being facilitated in significant ways by the WA State Sea Grant program, which has awarded new funding to many of our MBP faculty to continue our collective efforts in marine bioremediation. One of these new Sea Grant awards will support Yves-Alain Vetter as a postdoctoral fellow in Chemical Engineering at UW (with Barbara Krieger-Brockett) to interface with Geiselbrecht and the NMFS scientists involved in the new joint program. Vetter completes his doctoral thesis (advised by Deming in Oceanography), partially funded by the original ONR-URI grant, on "Bacterial foraging in marine aggregates and sediments by means of freely released extracellular enzymes" in June 1998. A complete listing of graduate student theses completed and anticipated as a result of ONR-URI funding is attached.

An updated version of the MBP's publication record, including some manuscripts near submission, is also attached, along with the substantial list of abstracts and invited or contributed presentations that have constituted a major part of our outreach effort. These records indicate the vitality of our individual and interactive research programs in marine bioremediation. That the majority of the papers are jointly authored by MBP faculty and students from various departments reflects clearly the degree of inter-disciplinary collaboration that we have succeeded in establishing on campus. As a result of the successes and continuing promise of our research, training and outreach activities under the auspices of the ONR-URI award, the University of Washington Provost Office has provided interim support for the program, as we make the transition from block ONR support to other sources and types of funding for research in marine bioremediation. In particular, we are focusing on industrial and private support of our research and training goals. Several contracts from the private sector are already in place as a result of this interim University support.

In summary, the final months of ONR-URI support to the UW-MBP have been used to excellent advantage to ensure the postgraduate careers of our first MBP graduates and to establish a new joint research program merging interests in the bioremediation and fisheries sciences. They have also provided leverage for new sources of external support for our continuing research and training program. Perhaps most importantly, our group of dedicated MBP faculty, students and staff continue to meet regularly, across disciplines and colleges, to benefit from our past experiences, to entrain new graduate and undergraduate students into the overall effort, and in general to build for the future of this emerging field at UW and elsewhere.

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